Exhibit 300 (BY2010)

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	PART ONE				
	OVERVIEW				
1. Date of Submission:	2008-09-08				
2. Agency:	026				
3. Bureau:	Bureau: 00				
4. Name of this Capital Asset:	JSC Mission Control Center				
5. Unique Project Identifier:	026-00-01-05-01-1406-00				
6. What kind of investment will t	his be in FY2010?				
Mixed Life Cycle					
7. What was the first budget year	7. What was the first budget year this investment was submitted to OMB?				
FY2003					

8. Provide a brief summary and justification for this investment, including a brief description of how this closes in part or in whole an identified agency performance gap.

The Mission Control Center (MCC) is a web of subsystems operating in concert to provide a world class command and control facility providing flight operations & support for all of NASA's human space flight activities. Utilizing nearly 88,000 square feet, the MCC consists of flight control and support rooms in JSC Bldgs 30A, 30M, 30S, 4N, 4S, 5N, and 5S, as well as, development and testing areas located off-site at contractor facilities. The MCC is made up of thousands of pieces of IT, including approximately 800 workstations, 150 servers, 300 printers, COTS and custom software, and a myriad of other IT that provide the platforms, voice, networking, video, data storage, and data retrieval to support human space flight activities. The MCC directly supports NASA's goals by providing command and control capabilities for safe mission operations of the International Space Station & Space Shuttle. Initially developed in the mid 1960s in support of NASA's Gemini program, the MCC is still in operation today supporting both the Space Shuttle & Space Station programs. While the MCC's basic mission of supporting space flight operations remains the same, the MCC's functionality has changed significantly in order to manage the increased technical complexity of our modern day Space Shuttle and Space Station systems. Additional investments in IT are necessary not only to maintain the existing equipment, but also to replace the equipment as it becomes non-maintainable due to escalating sustaining costs or due to the unavailability of commercial vendors. Mr. Macha has overall PM responsibility for the MCC & IPS under the Mission Operations Support Contract (MSOC). The two are functionally & organizationally related. His involvement with these facilities occurs on a regular basis. L Bishop supports him with MCC, but Mr. Macha has overall direct responsibility for budget, schedules, & work content for these facilities.

9. Did the Agency's Executive/Investment Committee approve this request?

yes

9.a. If "yes," what was the date of this approval?

2008-06-19

10. Did the Program/Project Manager review this Exhibit?

yes

11. Program/Project Manager Name:

Mitchell Macha

Program/Project Manager Phone:

281-483-7059

Program/Project Manager Email:

mitchell.g.macha@nasa.gov

11.a. What is the current FAC-P/PM certification level of the project/program manager?

Senior/Expert/DAWIA-Level 3

11.b. When was the Program/Project Manager Assigned?

2001-11-01 11.c. What date did the Program/Project Manager receive the FACP/PM certification? If the certification has not been issued, what is the anticipated date for certification? 2008-08-08 12. Has the agency developed and/or promoted cost effective, energy-efficient and environmentally sustainable techniques or practices for this project. yes 12.a. Will this investment include electronic assets (including computers)? 12.b. Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only) no 13. Does this investment directly support one of the PMA initiatives? If yes, select the initiatives that apply: udget Performance Integration 13.a. Briefly and specifically describe for each selected how this asset directly supports the identified initiative(s)? (e.g. If E-Gov is selected, is it an approved shared service provider or the managing partner?) Human Capital â€" The MCC fosters a culture that is built on trust, respect, teamwork, communication, creativity, and empowerment. Budget Performance - Objectives/goals for Shuttle Program are planned and measured accordingly through the use of the Integrated Budget and Performance Document. Competition - Approximately 95% of MCC funding is contracted dollars. The prime contractor for MCC operations utilizes competitively awarded procurements whenever possible. 14. Does this investment support a program assessed using the Program Assessment Rating Tool (PART)? yes 14.a. If yes, does this investment address a weakness found during the PART review? no 14.b. If yes, what is the name of the PARTed program? 10002314 - Space and Flight Support 14.c. If yes, what rating did the PART receive? Adequate 15. Is this investment for information technology? yes 16. What is the level of the IT Project (per CIO Council's PM Guidance)? Level 3 17. What project management qualifications does the Project Manager have? (per CIO Council's PM Guidance) (1) Project manager has been validated as qualified for this investment 18. Is this investment identified as high risk on the Q4 - FY 2008 agency high risk report (per OMB memorandum M-05-23)? 19. Is this a financial management system? nο 19.a.2. If no, what does it address? Human Spaceflight 20. What is the percentage breakout for the total FY2010 funding request for the following? (This should total 100%)

ompetitive Sourcing uman Capital

Hardware	16
Software	4
Services	80
Other	0

21. If this project produces information dissemination products for the public, are these products published to the Internet in conformance with OMB Memorandum 05-04 and included in your agency inventory, schedules and priorities?

n/a

22. Contact information of individual responsible for privacy related questions.

Name

Patti Stockman

Phone Number

(202) 358-4787

Title

Privacy and Records Manager

Email

patti.stockman@nasa.gov

23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval?

ves

24. Does this investment directly support one of the GAO High Risk Areas?

no

SUMMARY OF SPEND

1. Provide the total estimated life-cycle cost for this investment by completing the following table. All amounts represent budget authority in millions, and are rounded to three decimal places. Federal personnel costs should be included only in the row designated Government FTE Cost, and should be excluded from the amounts shown for Planning, Full Acquisition, and Operation/Maintenance. The total estimated annual cost of the investment is the sum of costs for Planning, Full Acquisition, and Operation/Maintenance. For Federal buildings and facilities, life-cycle costs should include long term energy, environmental, decommissioning, and/or restoration costs. The costs associated with the entire life-cycle of the investment should be included in this report.

All amounts represent Budget Authority

(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)

	PY-1 & Earlier	PY	CY	BY
	-2007	2008	2009	2010
Planning Budgetary Resources	0	0	0	0
Acquisition Budgetary Resources	38.122	4.5426	4.1322	3.9509
Maintenance Budgetary Resources	198.779	34.4814	35.5159	36.5814
Government FTE Cost	9.995	1.07736	1.11399	1.15187
# of FTEs	64	8	8	8

Note: For the cross-agency investments, this table should include all funding (both managing partner and partner agencies).

Government FTE Costs should not be included as part of the TOTAL represented.

2. Will this project require the agency to hire additional FTE's?

no

3. If the summary of spending has changed from the FY2009 President's budget request, briefly explain those changes.

Changes to the BY2010 budget request addresses increased requirements to support the Constellation Program not reflected in the BY2009 submit.

PERFORMANCE

In order to successfully address this area of the exhibit 300, performance goals must be provided for the agency and be linked to the annual performance plan. The investment must discuss the agency's mission and strategic goals, and performance measures (indicators) must be provided. These goals need to map to the gap in the agency's strategic goals and objectives this investment is designed to fill. They are the internal and external performance benefits this investment is expected to deliver to the agency (e.g., improve efficiency by 60 percent, increase citizen participation by 300 percent a year to achieve an overall citizen participation rate of 75 percent by FY 2xxx, etc.). The goals must be clearly measurable investment outcomes, and if applicable, investment outputs. They do not include the completion date of the module, milestones, or investment, or general goals, such as, significant, better, improved that do not have a quantitative measure.

Agencies must use the following table to report performance goals and measures for the major investment and use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). Map all Measurement Indicators to the corresponding Measurement Area and Measurement Grouping identified in the PRM. There should be at least one Measurement Indicator for each of the four different Measurement Areas (for each fiscal year). The PRM is available at www.egov.gov. The table can be extended to include performance measures for years beyond the next President's Budget.

	Fiscal Year	Strategic Goal Supported	Measurement Area	Measurement Grouping	Measurement Indicator	Baseline	Planned Improvement to the Baseline	Actual Results
1	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Technology	Service Availability	Availability of ground system services for MCC critical and non-critical Shuttle and Station functions for all unscheduled outages and down time.	Provide 98% availability of non- critical functions for all unscheduled outages and down time.	Increase to and maintain availability at 100% through end of life 2016.	Continued to average 99.9% availability over the past 12 months (Apr 06-Mar 07)
2	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Processes and Activities	Errors	Software fault density measures software quality. Errors are reported via anomaly reports. Supports the strategic goal of enhancing efficiency in operations and sustaining of the MCC.	Achieve a software fault density of no more than 1 anomaly per 5 thousand source lines of code (KSLOC) for mature software (greater than 2 years old) and 1 anomaly per 1 KSLOC for code less than 2 years old.	Maintain the current baseline through end of life.	Averaged .015 anomaly reports per KSLOC for the past 12 months (Jun â€~06 thru May â€~07)
3	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	System Response Time	Implement changes to the MCC baseline designated as Flight Priority 1 and return the system to operational status within	Meet the OND for all Flight Priority 1 service requests.	Maintain the current baseline through end of life.	Currently performing at 90%. 1 out of 10 service requests designated as Flight Priority 1

4	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Mission and Business Results	Space Operations	the period agreed to by the user (Operational Need Date/OND). Provide command and control capabilities for safe mission operations of the International Space Station and Space Shuttle.	Ensure the MCC is able to provide command and control of Shuttle and Station activities without causing delays to the mission.	Maintain the current baseline through end of life.	was not met during the period Jun '06 to May '07 Currently performing at 100%. The MCC has not caused a Shuttle launch or Station activity delay during the performance period.
5	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Technology	Service Availability	Availability of ground system services for MCC critical and non-critical Shuttle and Station functions for all unscheduled outages and down time.	Provide 98% availability of non- critical functions for all unscheduled outages and down time.	Increase to and maintain availability at 100% through end of life 2016.	Continued to average 99.9% availability over the past 12 months (Jun 07-May 08)
6	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Processes and Activities	Errors	Software fault density measures software quality. Errors are reported via anomaly reports. Supports the strategic goal of enhancing efficiency in operations and sustaining of the MCC.	Achieve a software fault density of no more than 1 anomaly per 5 thousand source lines of code (KSLOC) for mature software (greater than 2 years old) and 1 anomaly per 1 KSLOC for code less than 2 years old.	Maintain the current baseline through end of life.	Averaged .01675 anomaly reports per KSLOC for the past 12 months (Jun â€~07 thru May â€~08)
7	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	System Response Time	Implement changes to the MCC baseline designated as Flight Priority 1 and return the system to operational status within the period agreed to by the user	Meet the OND for all Flight Priority 1 service requests.	Maintain the current baseline through end of life.	Currently performing at 100%. ONDs for all Flight Priority 1 service requests have been met from Jun '07 to May

					(Operational Need Date/OND).			'08
8	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Mission and Business Results	Space Operations	Provide command and control capabilities for safe mission operations of the International Space Station and Space Shuttle.	Ensure the MCC is able to provide command and control of Shuttle and Station activities without causing delays to the mission.	Maintain the current baseline through end of life.	Currently performing at 100%. The MCC has not delayed nor negatively impacted a mission.
9	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Technology	Service Availability	Availability of ground system services for MCC critical and non-critical Shuttle and Station functions for all unscheduled outages and down time.	Provide 98% availability of non- critical functions for all unscheduled outages and down time.	Increase to and maintain availability at 100% through end of life 2016.	TBD
10	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Processes and Activities	Errors	Software fault density measures software quality. Errors are reported via anomaly reports. Supports the strategic goal of enhancing efficiency in operations and sustaining of the MCC.	Achieve a software fault density of no more than 1 anomaly per 5 thousand source lines of code (KSLOC) for mature software (greater than 2 years old) and 1 anomaly per 1 KSLOC for code less than 2 years old.	Maintain the current baseline through end of life.	TBD
11	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	System Response Time	Implement changes to the MCC baseline designated as Flight Priority 1 and return the system to operational status within the period agreed to by the user (Operational Need Date/OND).	Meet the OND for all Flight Priority 1 service requests.	Maintain the current baseline through end of life.	TBD
12	2009	Goal 1: Fly the Shuttle	Mission and Business	Space Operations	Provide command and	Ensure the MCC is able	Maintain the current	TBD

		as safely as possible until its retirement, not later than 2010.	Results		control capabilities for safe mission operations of the International Space Station and Space Shuttle.	to provide command and control of Shuttle and Station activities without causing delays to the mission.	baseline through end of life.	
13	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Technology	Service Availability	,		Increase to and maintain availability at 100% through end of life 2016	TBD
14	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Processes and Activities	Errors	Software fault density measures software quality. Errors are reported via anomaly reports. Supports the strategic goal of enhancing efficiency in operations and sustaining of the MCC	Achieve a software fault density of no more than 1 anomaly per 5 thousand source lines of code (KSLOC) for mature software (greater than 2 years old) and 1 anomaly per 1 KSLOC for code less than 2 years old	Maintain the current baseline through end of life	TBD
15	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	System Response Time	Implement changes to the MCC baseline designated as Flight Priority 1 and return the system to operational status within the period agreed to by the user (Operational Need Date/OND).	Meet the OND for all Flight Priority 1 service requests.	Maintain the current baseline through end of life	TBD
16	2010	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later	Mission and Business Results	Space Operations	Provide command and control capabilities for safe mission operations of the	Ensure the MCC is able to provide command and control of Shuttle and Station	Maintain the current baseline through end of life	TBD

than 2010.	International Space Station and Space Shuttle	activities without causing delays to the mission.		
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EA

In order to successfully address this area of the business case and capital asset plan you must ensure the investment is included in the agency's EA and Capital Planning and Investment Control (CPIC) process, and is mapped to and supports the FEA. You must also ensure the business case demonstrates the relationship between the investment and the business, performance, data, services, application, and technology layers of the agency's EA.

1. Is this investment included in your agency's target enterprise architecture?

yes

2. Is this investment included in the agency's EA Transition Strategy?

yes

2.a. If yes, provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment.

JSC Mission Control Center

3. Is this investment identified in a completed (contains a target architecture) and approved segment architecture?

yes

3.a. If yes, provide the six digit code corresponding to the agency segment architecture. The segment architecture codes are maintained by the agency Chief Architect.

463-000

4. Identify the service components funded by this major IT investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to http://www.whitehouse.gov/omb/egov/.

Component: Use existing SRM Components or identify as NEW. A NEW component is one not already identified as a service component in the FEA SRM.

Reused Name and UPI: A reused component is one being funded by another investment, but being used by this investment. Rather than answer yes or no, identify the reused service component funded by the other investment and identify the other investment using the Unique Project Identifier (UPI) code from the OMB Ex 300 or Ex 53 submission.

Internal or External Reuse?: Internal reuse is within an agency. For example, one agency within a department is reusing a service component provided by another agency within the same department. External reuse is one agency within a department reusing a service component provided by another agency in another department. A good example of this is an E-Gov initiative service being reused by multiple organizations across the federal government.

Funding Percentage: Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the funding level transferred to another agency to pay for the service.

5. To demonstrate how this major IT investment aligns with the FEA Technical Reference Model (TRM), please list the Service Areas, Categories, Standards, and Service Specifications supporting this IT investment.

FEA SRM Component: Service Components identified in the previous question should be entered in this column. Please enter multiple rows for FEA SRM Components supported by multiple TRM Service Specifications.

Service Specification: In the Service Specification field, Agencies should provide information on the specified technical standard or vendor product mapped to the FEA TRM Service Standard, including model or version numbers, as appropriate.

	SRM Component	Service Area	Service Category	Service Standard	Service Specification (i.e., vendor and product name)
1	Configuration Management	Service Platform and Infrastructure	Software Engineering	Software Configuration Management	Telelogic CM Synergy
2	Data Warehouse	Service Platform and Infrastructure	Database / Storage	Database	Oracle

	I		T	1	
3	Data Warehouse	Service Platform and Infrastructure	Hardware / Infrastructure	Peripherals	IBM Printers
4	Imagery	Service Platform and Infrastructure	Database / Storage	Database	Oracle
5	Imagery	Service Platform and Infrastructure	Database / Storage	Storage	IBM Shark Storage Area Network
6	Imagery	Service Platform and Infrastructure	Hardware / Infrastructure	Local Area Network (LAN)	Cisco switches and routers
7	Information Sharing	Service Platform and Infrastructure	Database / Storage	Storage	IBM Shark Storage Area Network
8	Information Sharing	Service Platform and Infrastructure	Hardware / Infrastructure	Local Area Network (LAN)	Cisco switches and routers
9	Information Sharing	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	HP (formerly DEC) Alphas
10	Instrumentation and Testing	Service Platform and Infrastructure	Software Engineering	Test Management	None at this time
11	Library / Storage	Service Platform and Infrastructure	Database / Storage	Storage	IBM Shark Storage Area Network
12	Mathematical	Service Platform and Infrastructure	Database / Storage	Database	Oracle
13	Mathematical	Service Platform and Infrastructure	Database / Storage	Storage	IBM Shark Storage Area Network
14	Mathematical	Service Platform and Infrastructure	Hardware / Infrastructure	Local Area Network (LAN)	Cisco switches and routers
15	Mathematical	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	HP (formerly DEC) Alphas
16	Legacy Integration	Service Interface and Integration	Integration	Enterprise Application Integration	N/A
17	Data Integration	Service Interface and Integration	Integration	Enterprise Application Integration	N/A
18	Software Development	Service Platform and Infrastructure	Software Engineering	Integrated Development Environment	N/A

6. Will the application leverage existing components and/or applications across the Government (i.e., FirstGov, Pay.Gov, etc)?

no

PART TWO

RISK

You should perform a risk assessment during the early planning and initial concept phase of the investment's life-cycle, develop a risk-adjusted life-cycle cost estimate and a plan to eliminate, mitigate or manage risk, and be actively managing risk throughout the investment's life-cycle.

Answer the following questions to describe how you are managing investment risks.

1. Does the investment have a Risk Management Plan?

yes

1.a. If yes, what is the date of the plan?

2008-07-16

1.b. Has the Risk Management Plan been significantly changed since last year's submission to OMB?

no

3. Briefly describe how investment risks are reflected in the life cycle cost estimate and investment schedule:

The project employed a Cost-Effectiveness Analysis in comparing the alternatives. The alternative is cost-effective if, on the basis of life cycle cost analysis of competing alternatives, it is determined to have the lowest costs expressed in present value terms. Cost effectiveness analysis is being used because each alternative has the same annual effects and dollar values cannot be assigned to their benefits. In addition to the total cost of ownership, risk analysis and sensitivity analysis was used in understanding the risk-adjusted costs. The project has accounted for each risk in each of the alternatives reviewed. There are residual risks that are common to all alternatives that are basically unavoidable. These risks include a) buying and using high performance technology that is at the leading edge - systems that are sold in small numbers and so are not field-proven - systems that are not as reliable as servers and microcomputers sold by the millions; b) risks of a dynamically evolving market, c) risk of changes in user workload composition and size and that the workload may not be well-suited to the platform; d) limited supply of staff with the specialized skills required to configure, operate, and maintain these specialized machines, such as finding system administrators with the specialized skills required for specific machines. The project has accounted for risks as defined in the Risk Management plan. All risks have been quantified and are included as a cost. Additionally, these risks are taken into consideration in the Acquisition Strategy and are tracked though-out the life cycle of the projects by project management processes including Operational Analysis.

COST & SCHEDULE

1. Does the earned value management system meet the criteria in ANSI/EIA Standard 748?

ves

2. Is the CV% or SV% greater than ± 10%?

no

2.b. If yes, explain the variance.

NASA utilizes Primavera ProSight to generate the E300. Planned Value (PV) and Earned Value (EV) figures are manually entered into the Cost and Schedule Performance Section from contractor provided Earned Value reports. These figures, along with DME budget data pulled from other areas of the E300, are used to calculate the Actual Cost (AC). This produces a false variance because the E300 budget data contains both Government and contracted IT costs while the contractor EVM data reflects only contracted costs. Further, the contractor's Earned Value metrics include both IT and non-IT costs and the E300 only reports IT costs.

2.c. If yes, what corrective actions are being taken?

No corrective action is being taken as MSOC's total cost variance for the MCC is within the threshold of +/-5% as established in the MSOC contract. The cost variance calculated by ProSight is not a valid indicator of actual performance.

3. Has the investment re-baselined during the past fiscal year?

no

Generated by Primavera ProSight